

IN THE CLAIMS:

1. (Currently Amended) A method for producing a monolayer of molecules on a surface, the method comprising:

loading a stamp with seed molecules;

5 transferring seed molecules from the stamp to the a flat surface, wherein the transferring comprises transferring a fraction of the seed molecules loaded on the stamp to the flat surface and wherein the transferring comprises adsorbing the seed molecules to the stamp and adsorbing the seed molecules to the flat surface, the adsorption of the seed molecules to the stamp being stronger than the adsorption of the seed molecules to the flat surface; and

10 self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer on [a] the flat surface, wherein self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer comprises producing a homogeneous area, wherein the homogeneous area comprises a monolayer of molecules on the flat surface, and wherein the monolayer of molecules on the flat surface has no diffusive seed 15 molecules component that can relocate and destroy amplification accuracy.

2. (Canceled)

3. (Canceled)

20 4. (Original) A method as claimed in claim 1, wherein the amplifying comprises linear amplification of the seed molecules.

25 5. (Original) A method as claimed in claim 1, wherein the amplifying comprises exponential amplification of the seed molecules.

6. (Original) A method as claimed in claim 1, wherein the amplifying comprises directional amplification of the seed molecules.

7. (Original) A method as claimed in claim 6, wherein the seed molecules are directionally
5 amplified to form conductive structures.

8. (Previously Presented) A method as claimed in claim 6, comprising electroless plating of
the directionally amplified seed molecules with a metal.

10 9. (Original) A method as claimed in claim 6, wherein the directional amplification is
controlled by the geometry of the seed molecule.

10. (Original) A method as claimed in claim 6, wherein the directional amplification is
controlled by application of an external force.

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11. (Original) A method as claimed in claim 10, wherein the external force comprises an
electrical force.

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12. (Original) A method as claimed in claim 10, wherein the external force comprises a
magnetic force.

13. (Original) A method as claimed in claim 10, wherein the external force comprises a
hydrodynamic force.

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14. (Original) A method as claimed in claim 1, wherein the amplifying comprises a
polymerase chain reaction.

15. (Canceled)

16. (Canceled)

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17. (Currently Amended) A method as claimed in claim 1, wherein the amplifying comprises the use of an in vitro translation system to produce a monolayer of protein.

18. (Canceled)

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19. (Canceled)

20. (Original) A method as claimed in claim 1, wherein the monolayer protects the surface from etchants.

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21. (Previously Presented) A method as claimed in claim 1, wherein the monolayer comprises DNA.

22. (Previously Presented) A method as claimed in claim 1, comprising repeating the
20 transferring and amplifying on plural surfaces before reloading the stamp with seed molecules.

23. (Withdrawn) A biosensor comprising surface treated with a method as claimed in claim 1.